UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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September 15, 2011

Rahul Thaker, P.E.
Permitting Section
Division of Air Quality
North Carolina Department of Environmental
and Natural Resources
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

RE: PSD Applications for Elizabethtown Energy, LLC (PSD-NC-238) and Lumberton Energy, LLC (PSD-NC-239)

Dear Mr. Thaker:

Thank you for sending the Prevention of Significant Determination (PSD) applications for the proposed modifications for Elizabethtown Energy, LLC and Lumberton Energy, LLC located in Elizabethtown and Lumberton, North Carolina, respectively. These two facilities are very similar; hence, the comments provided in this letter include the United States Environmental Protection Agency's comments on both projects. The purpose of these projects is the addition of biomass as a fuel for the 215MMBtu/hr steam boilers, two at each facility. The applicants have determined that each project is subject to PSD review for carbon monoxide (CO), sulfuric acid mist (SAM), and greenhouse gases (GHGs).

Based on our review of the PSD applications, we have the following comments. We provide these comments to help ensure that the projects meet federal Clean Air Act requirements, that the permits will provide necessary information so that the basis for the permit decisions is transparent and readily accessible to the public, and that the record provides adequate support for the decisions.

Baseline actual emissions

In adopting the New Source Review (NSR) Reform regulations, North Carolina Department of Air Quality (NCDAQ) (*see* Federal Register notice (76 FR 49313), dated August 10, 2011) revised the federal definition of baseline actual emissions to restrict both electric utility steam generating units (EUSGUs) and non-EUSGUs to a look back period of only five years. The Federal Register notice explains that "North Carolina rules provide the option of allowing a different time period, not to exceed 10 years, if the owner or operator demonstrates that it is more representative of normal source operation." The PSD applications state that during the immediate 5-year look back period (2005-2010) the facilities experienced sporadic and limited operation. They decided that the period from Jan 2002 through December 2003 is more representative of normal source operation. The supporting records for the respective draft permits for the projects should include NCDAQ's determinations regarding the applicants' demonstrations to go beyond the 5-year look back period and the supporting documentation for those determinations.

CO_2e Emissions Limit

It is our understanding that NCDAQ proposed to limit the projects' CO_2e emissions to 0.29 lb of CO_2e /lb of steam produced. The applicant instead proposed to perform stack tests (*see* Repose to NCDAQ Email Dated July 15, 2001) within a period of time after they achieve the maximum production rate to establish CO_2e emissions limit. NCDAQ's SIP-approved PSD program requires that permits include a Best Available Control Technology (BACT) limit for each regulated NSR pollutant emitted from the facility, which includes the GHGs emitted from these projects. [15A NCAC 02D.0530(g)] Accordingly, these draft PSD permits should include CO_2e emission limits with appropriate testing, monitoring, reporting, and recordkeeping requirements. Given the lack of information on CO_2e emissions from certain kinds of projects, NCDAQ could also choose to include in the draft PSD permits an initial CO_2e emission rate that is set at a conservatively high level based on your assessment of the current data and uncertainty, along with a condition to perform a post-construction stack test and a process for adjusting the rate downward after completing such testing. That process must be included in a permit condition that is practicably enforceable with specific time frames and SIP-approved mechanisms to finalize the CO_2e emission limits in the permits once they are established.

Carbon Monoxide Control Efficiency

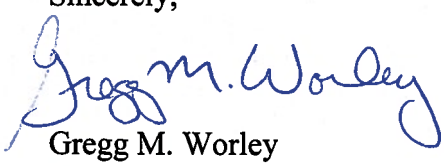
The application addendum dated June 6, 2011, containing the updated PSD BACT analysis, indicates in Table II.A-1 *Ranking of Feasible CO Control Techniques – Spreader Stoker Boiler*, that the control efficiency range for catalytic oxidation is 50-90%. The applicant, however, estimated the cost effectiveness for reducing CO using a control efficiency of only 50%. The Technical Submittal prepared by the vendor states that there is the option to include the catalytic oxidation feature to the Regenerative Selective Catalytic Reduction (RSCR) System that would reduce CO by 45%. An email from Rich Abrams, Vice President of Babcock Power to Dennis Pednault dated June 4, 2011, says "this system is capable of 50% CO reduction; we can do better if needed." The majority of the PSD applications EPA reviews that reduce CO emissions through catalytic oxidation propose CO reduction efficiency between 70-90%. EPA recommends that NCDAQ obtain from the applicant a comprehensive explanation with supporting documentation for not being able to achieve a reduction of CO greater than the 50% proposed by the applicant and provide its assessment of that explanation in the record for the draft PSD permits.

Good Combustion Practices (GCPs)

The applicant is proposing GCPs as the BACT control mechanism for CO and SAM emissions. The application package does not seem to include a list of the practices the applicant is planning to implement. EPA recommends that either the applicant should supplement the application to include a description of the proposed GCPs or the permitting authority could provide this information in the supporting records for the respective proposed permits.

If you have any questions regarding these comments or need additional information, feel free to contact Ana M. Oquendo at 404-562-9781 or Katy R. Forney at 404-562-9130.

Sincerely,



Gregg M. Worley
Chief
Air Permits Section